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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,460	10/14/2004	Rainer Moll	AT02 0019 US	9151

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EXAMINER

NINO, ADOLFO

ART UNIT	PAPER NUMBER
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2831

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/511,460	Applicant(s) MOLL ET AL.	
	Examiner Adolfo Nino	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/14/04</u> . | 6) <input type="checkbox"/> Other: ____. |

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed herewith.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 10/14/04 is being considered by the examiner.

Specification

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they

should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

The disclosure is objected to because of the following informalities:

The specification is missing heading for each section (i.e. Background of the Invention).

Page 6, line 12-14, "The connection contacts 5 and 6...being electrically conductively connected to the connection contacts 5 and 6..." is confusing. How can the contacts 5 and 6 be electrically conductively connected to themselves?

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "the transitional zone" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "the transitional zone" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 7 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Tan et al. (US 6,864,423 B2).

Regarding claim 1, Tan et al. disclose a module for a data carrier (800; fig. 8), which module includes an integrated component (504) with at least two connection

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contacts (802) and, for each connection contact (802), a connecting part (110) which is electrically conductively connected to the relevant connection contact (fig. 8), the connection contacts (802) being constructed so as to project from the integrated component (504) and the connecting parts (110) consisting of metal and being connected so as to be plate-shaped (fig. 8), the connecting parts (110) comprising remnants of raised portions (108) which have been formed by mechanical deformation (**note** that the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation ("formed by mechanical deformation") has not been given patentable weight. During examination, the patentability of a product-by-process claim is determined by the novelty and non-obviousness of the claimed product itself without consideration of the process for making it, which is recited in the claim. In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).) of the connecting parts (110), which remnants (108) project from the connecting parts (110) in the direction of the connection contacts (fig. 8).

Regarding claim 2, note that the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation ("formed by stamping") has not been given patentable weight. During examination, the patentability of a product-by-process claim is determined by the novelty and non-obviousness of the claimed product itself without consideration of the process for making it, which is recited in the claim. In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).

Regarding claim 7, Tan et al. disclose a data carrier (800; fig. 8) provided with a module which includes an integrated component (504) with at least two connection

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contacts (802) and, for each connection contact (802), a connecting part (110) which is electrically conductively connected to the relevant connection contact (802; fig. 8), the connection contacts (802) being constructed so as to project from the integrated component (504) and the connecting parts (110) consisting of metal and being constructed so as to be plate-shaped (fig. 8), the connecting parts (110) comprising remnants of raised portions (108) which have been formed by mechanical deformation (**note** that the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation ("formed by mechanical deformation") has not been given patentable weight. During examination, the patentability of a product-by-process claim is determined by the novelty and non-obviousness of the claimed product itself without consideration of the process for making it, which is recited in the claim. In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).) of the connecting parts (110), which remnants project from the connecting parts in the direction of the connection contacts (fig.8).

Regarding claim 8, note that the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation ("formed by stamping") has not been given patentable weight. During examination, the patentability of a product-by-process claim is determined by the novelty and non-obviousness of the claimed product itself without consideration of the process for making it, which is recited in the claim. In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3, 4, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tan et al. (US 6,864,423 B2).

Regarding claims 3 and 9, Tan et al. disclose a module as claimed in claims 1 and 7, respectively, **except for** the remnants of raised portions having a height of between 1.0 um and 10 um. It is well known in the art that the height of raised portions have some range for which it is acceptable for the system to work. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the remnants of Tan et al. have a height of between 1.0 um and 10 um, since it

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has been held that, where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding claims 4 and 10, as best understood by the Examiner, Tan et al. disclose a module as claimed in claims 1 and 7, respectively, **except for** the remnants of raised portions having a lateral length of between 10 um and 50 um in the transitional zone to the connecting parts. It is well known in the art that lateral length of contacts have some range for which it is acceptable for the system to work. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the remnants of Tan et al. have a lateral length of between 10 um and 50 um in the transitional zone to the connecting parts, since it has been held that, where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Claims 5, 6, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tan et al. (US 6,864,423 B2) in view of Taguchi (US 6,465,879 B1).

Regarding claims 5 and 11, Tan et al. disclose a module as claimed in claims 1 and 7, respectively, having a filler material (804) provided between the integrated component and the connecting parts (fig. 8), **but Tan et al. do not disclose** the filler material enclosing the connection contacts and the remnants of raised portions.

Taguchi teaches that it is known to have a filler enclosing connection contacts and

remnants of raised portions as set forth at column 13, lines 31-67. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the filler material of Tan et al. enclose the connection contacts and the remnants of raised portions, as taught by Taguchi in order to better protect and secure the contacts.

Regarding claims 6 and 12, the modified Tan et al. disclose a module as claimed in claims 5 and 11, respectively, in which the filler material (804) is formed by a foil which consists of a synthetic material (col. 4, lines 10-11 of Tan et al.) and can be softened at least once by heating. **Note** that it has been held that the recitation that an element "can" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138. **Moreover**, note that the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation ("by heating") has not been given patentable weight. During examination, the patentability of a product-by-process claim is determined by the novelty and non-obviousness of the claimed product itself without consideration of the process for making it, which is recited in the claim. In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tsuneda et al. (US 6,756,661 B2) disclose a semiconductor device. Tsukamoto (US 6,281,448 B1) discloses a circuit board and electronic

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components. Akram et al. (US 5,483,741) disclose a method for fabricating silicon based interconnects. Farnworth et al. (US 5,326,428) disclose a method for testing semiconductors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adolfo Nino whose telephone number is (571) 272-1981. The examiner can normally be reached on M-F (7:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A. Reichard can be reached on (571) 272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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